

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-5 (Canceled).

Claim 6 (Currently Amended): An image processing control method that realizes a function of image processing by downloading a program and data to an image processing unit based on an information from an operating unit, comprising:

converting the information from the operating unit into an internal variable based on a request for controlling image processing from a main control software;

determining, based on a status of previously acquired resource and current process information, a resource that has to be acquired to make a response to a request for the resource;

determining whether the process is executable with the resource requested;

converting the internal variable, upon determining that the process is executable with the resource requested, into detailed information required for downloading the program and the data;

converting, by a plurality of detailed level converting management units, the detailed information into a plurality of parameters corresponding to the information from the operating unit;

linking each of the plurality of detailed level converting management units to only a corresponding download setting request-making unit by referring to the information converted from the operating unit for each image processing;

comparing, by a plurality of the download setting request-making units, each individual parameter to only a corresponding previous setting for the individual parameter set in a linked detailed level converting management unit; and

downloading only parameters with changed settings to the image processing unit based on a request for executing download.

Claim 7 (Currently Amended): An apparatus for controlling image processing comprising:

an image processing unit that realizes a function of image processing by downloading a program and data;

a first converting unit that converts information from an operating unit into information for downloading the program and the data to the image processing unit; and

a downloading unit including

a translating unit that translates the information from the operating unit into information recognized by the first converting unit,

a second converting unit that converts information translated by the translating unit into detailed information for downloading the program and the data to the image processing unit, and

a download request unit, including a plurality of detailed level converting management units and a plurality of download setting request-making units that are each linked to only a corresponding detailed level converting management unit by referring to the information translated by the translating unit for each image processing, wherein

the downloading unit converts the detailed information into a plurality of parameters corresponding to the information from the operating unit,

the downloading unit compares each individual parameter to only a corresponding previous setting for the individual parameter set in a linked detailed level converting management unit, and

the downloading unit makes a request for downloading only parameters with changed settings to the image processing unit.

Claims 8-11 (Canceled).

Claim 12 (Previously Presented): The apparatus for controlling image processing according to claim 7, wherein the translating unit performs a central management of the information from the operating unit.

Claims 13 and 14 (Canceled).

Claim 15 (Previously Presented): The apparatus for controlling image processing according to claim 7, wherein

the download request unit includes an information table for managing the detailed information, and

the download request unit determines the program and the data to be downloaded to the image processing unit based on the information table.

Claim 16 (Previously Presented): The apparatus for controlling image processing according to claim 7, further comprising a common interface that is determined for each image processing, wherein

the translating unit transmits the information translated to the download request unit via the common interface.

Claim 17 (Previously Presented): The apparatus for controlling image processing according to claim 7, wherein

the second converting unit includes a conversion table composed of request levels from the operating unit and corresponding combination of the program and the data to be downloaded, and

the second converting unit determines the detailed information based on the conversion table.

Claim 18 (Previously Presented): The apparatus for controlling image processing according to claim 7, wherein the translating unit, the second converting unit, and the download request unit are managed for each image processing.

Claim 19 (Currently Amended): An apparatus for controlling image processing comprising:

an image processing unit that realizes a function of image processing by downloading a program and data;

a request managing unit that manages a request for single execution;

a first converting unit that converts information from an operating unit into an internal variable;

a resource managing unit that manages a resource to respond to the request for the single execution and a service of the image processing unit that has the resource;

a second converting unit that converts the internal variable into detailed information for downloading the program and the data to the image processing unit; and

a downloading unit, including a plurality of detailed level converting management units and a plurality of download setting request-making units that are each linked to only a

corresponding detailed level converting management unit by referring to the information converted by the first converting unit for each image processing, wherein

the downloading unit converts the detailed information into a plurality of parameters corresponding to the information from the operating unit,

the downloading unit compares each individual parameter to only a corresponding previous setting for the individual parameter set in a linked detailed level converting management unit, and

the downloading unit makes a request for downloading only parameters with changed settings to the image processing unit.

Claim 20 (Original): The apparatus for controlling image processing according to claim 19, wherein the request managing unit receives requests for setting parameters for image processing, executing the image processing, ending the image processing, and canceling the image processing, and transmits one of the requests to other units.

Claim 21 (Original): The apparatus for controlling image processing according to claim 19, wherein the request for the single execution is made from an instruction from the operating unit via a control unit that is provided at a preceding stage of the apparatus.

Claim 22 (Original): The apparatus for controlling image processing according to claim 19, the resource managing unit, when managing the resource, determines whether to perform an image processing control based on a status of current resources reserved.

Claim 23 (Original): The apparatus for controlling image processing according to claim 19, the resource managing unit, when managing the service, determines a processing

capability of the image processing unit that has the resource, and switches over the service to be provided according to the processing capability determined.

Claim 24 (Canceled).

Claim 25 (Original): The apparatus for controlling image processing according to claim 19, wherein the downloading unit is provided for every image processing unit.

Claim 26 (Original): The apparatus for controlling image processing according to claim 19, wherein the image processing unit is a digital signal processor.

Claim 27 (Original): The apparatus for controlling image processing according to claim 19, wherein the image processing unit is an image processing device.

Claim 28 (Previously Presented): The apparatus for controlling image processing according to claim 27, wherein the image processing device includes at least one of a scanner or a printer.

Claim 29 (Currently Amended): An image forming apparatus comprising:  
an image processing control apparatus that includes  
    an image processing unit that performs image processing by downloading a  
    program and data;  
    a converting unit that converts information from an operating unit into  
information for downloading the program and the data to the image processing unit;  
    a downloading unit including

a translating unit that translates the information from the operating unit into information recognized by the first converting unit,

a second converting unit that converts information translated by the translating unit into detailed information for downloading the program and the data to the image processing unit, and

a download request unit, including a plurality of detailed level converting management units and a plurality of download setting request-making units that are each linked to only a corresponding detailed level converting management unit by referring to the information translated by the translating unit for each image processing, wherein

the downloading unit converts the detailed information into a plurality of parameters corresponding to the information from the operating unit,

the downloading unit compares each individual parameter to only a corresponding previous setting for the individual parameter set in a linked detailed level converting management unit, and

the downloading unit makes a request for downloading only parameters with changed settings to the image processing unit; and

an image forming unit that forms an image on a recording medium based on image information that is processed by the image processing control apparatus.

Claim 30 (Currently Amended): A computer readable storage medium encoded with instructions, which when executed by a computer, cause the computer to implement a method of controlling image processing, the method realizing a function of information processing by downloading a program and data to an information processing unit based on information from an operating unit, the method comprising:

converting the information from the operating unit into an internal variable based on a request for controlling image processing from a main control software;

determining, based on a status of previously acquired resource and current process information, a resource that has to be acquired to make a response to a request for the resource;

determining whether the process is executable with the resource requested;

converting the internal variable, upon determining that the process is executable with the resource requested, into detailed information required for downloading the program and the data;

converting, by a plurality of detailed level converting management units, the detailed information into a plurality of parameters corresponding to the information from the operating unit;

linking each of the plurality of detailed level converting management units to only a corresponding download setting request-making unit by referring to the information converted from the operating unit for each image processing;

comparing, by a plurality of the download setting request-making units, each individual parameter to only a corresponding previous setting for the individual parameter set in a linked detailed level converting management unit; and

downloading only parameters with changed settings to the image processing unit based on a request for executing download; and

updating an image processor based on the downloaded parameters.

Claims 31-33 (Canceled).